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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/817,377	04/02/2004	Henry W. Bonk	402200004dvj	2559

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EXAMINER	
BISSETT, MELANIE D	
ART UNIT	**PAPER NUMBER**
1711	

DATE MAILED: 02/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/817,377	BONK ET AL.	
	Examiner	Art Unit	
	Melanie D. Bissett	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *105,129-134 and 184-186* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *105,129-134 and 184-186* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 April 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *7/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: The brief description of drawings notes a line 6-6 in figure 6. Figure 6 does not disclose a line 6-6 but does disclose a line 7-7. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: parts 28B, 28C, 28D, 28E, 28F, 130, 132, and 170. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 105 and 129-134 are rejected under 35 U.S.C. 102(e) as being anticipated by Mitchell et al. as evidenced by Dow Plastics. Mitchell et al. (US 5,952,065 A) can be found on the applicant's Form PTO-1449. It is noted that the present application relates to a parent case filed 6/7/1995, US App. No. 08/475,275. However, the application does not provide support for a gas transmission rate of less than 15.0, as the specification only teaches rates of less than 10.0. Therefore, it is the examiner's position that the effective filing date of the present specification is 12/12/1995, and the Mitchell et al. reference, filed 8/31/1994, is available under 35 USC 102(e).

5. Mitchell discloses cushioning devices made from flexible membranes comprising at least one thermoplastic urethane layer and at least one ethylene vinyl alcohol copolymer layer (EVOH) (abstract). Preferred gas transmission rates for the membranes are less than 10 and most preferably less than 2.0 (col. 4 lines 35-46). Nitrogen is a preferred gas (col. 6 lines 25-40). Note Figure 19, showing nitrogen gas transmission rates of multi-layered membranes to be lower than 15.0 at average thicknesses of about 20.0 mils.

6. Regarding claims 129-134, note the language "wherein said cushioning device is employed" or "is incorporated". Since the claims are drawn to cushioning devices and the limitations are to final products of the intermediate cushioning devices, it is the examiner's position that the limitations of claims 129-134 represent future intended uses. It is the examiner's position that the cushioning device of Mitchell's invention

would function as a cushioning device for various seats or protective equipment articles. Thus, the reference anticipates the claims.

7. Claims 105 and 129-134 are rejected under 35 U.S.C. 102(b) as anticipated by Murakami. Murakami (US 5,578,372 A) can be found on the applicant's Form PTO-1449.

8. Murakami discloses composite films having a base film, a coating layer containing a vinylidene chloride polymer, and a polyurethane laminating layer (abstract). The films are used in pouch packaging and have high gas barrier properties (col. 1 lines 20-29; col. 2 lines 22-25). Thus, one of ordinary skill in the art would recognize the packaging films as flexible membranes that form cushioning devices. The base film includes PET and nylon materials (col. 2 lines 54-61). Polyol components for forming the polyurethane include polyester polyols formed from polyols and polycarboxylic acids (col. 6 lines 14-23). Suitable polyols include ethylene glycol, propylene glycol, butanediol, hexamethylene glycol, and neopentyl glycol, while suitable carboxylic acids include succinic acid and adipic acid (col. 6 lines 24-42).

9. The examples of Murakami show oxygen permeability values as low as 3.7 $cc/m^2/24$ h, showing that vinylidene chloride content can be altered to decrease the oxygen permeability. Because oxygen gas and nitrogen gas are both diatomic molecules with similar sizes, it is the examiner's position that a membrane having the cited low oxygen permeability would have the applicant's claimed nitrogen permeability rates. Also, example 1 shows a base film having a thickness of 15 μm, a coating layer,

and a laminating agent layer. Laminating agent layers have thicknesses of 0.1-10 μm (col. 7 lines 13-16) while coating layers have thicknesses of 0.01-5 μm (col. 5 lines 27-34). Thus, the membrane of example 1 would have a thickness of 15.11-30 μm (0.59-1.18 mils). If the membranes have low oxygen and nitrogen transmission rates at low thicknesses, one would recognize that membranes of higher thickness (about 20 mils) would have even lower gas transmission rates. For these reasons, it is the examiner's position that the reference anticipates the claimed cushioning device.

10. Regarding claims 129-134, note the language "wherein said cushioning device is employed" or "is incorporated". Since the claims are drawn to cushioning devices and the limitations are to final products of the intermediate cushioning devices, it is the examiner's position that the limitations of claims 129-134 represent future intended uses. It is the examiner's position that the cushioning device of Murakami's invention could function as a cushioning device for various seats or protective equipment articles. Thus, the reference anticipates the claims.

11. Claims 51-52 and 189 are rejected under 35 U.S.C. 102(b) as anticipated by Martin. Martin (US 4,513,058 A) can be found on the applicant's Form PTO-1449.

12. Martin teaches bladders for footballs comprising a thin layer of coating on a polyurethane film, the coating comprising EVOH, polyamide, or vinylidene chloride copolymers (abstract). Because the coated films serve to control air permeation (col. 1 lines 38-45), one of ordinary skill in the art would recognize the bladder films as flexible membranes. Example 1 shows the use of a polyester-based urethane film. The coated

films have low oxygen permeabilities (as low as 1.5 cc $O_2/m^2/24$ h, example 1) at thicknesses of about 5.5 mils. However, the reference does not teach nitrogen gas permeability. Because oxygen gas and nitrogen gas are both diatomic molecules with similar sizes, it is the examiner's position that a membrane having the cited low oxygen permeability would have the applicant's claimed nitrogen permeability rates. Also, if the membranes have low oxygen and nitrogen transmission rates at low thicknesses, one would recognize that membranes of higher thickness (about 20 mils) would have even lower gas transmission rates. For these reasons, it is the examiner's position that the reference anticipates the claimed cushioning device.

13. Regarding claims 129-134, note the language "wherein said cushioning device is employed" or "is incorporated". Since the claims are drawn to cushioning devices and the limitations are to final products of the intermediate cushioning devices, it is the examiner's position that the limitations of claims 129-134 represent future intended uses. It is the examiner's position that the cushioning device of Murakami's invention could function as a cushioning device for various seats or protective equipment articles. Thus, the reference anticipates the claims.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15. Claims 184-186 are rejected under 35 U.S.C. 103(a) as being obvious over Massara et al. in view of Mitchell et al.

16. The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(l)(1) and § 706.02(l)(2).

17. Massara teaches seats having air bladders as back supports in the lumbar region (abstract). However, the reference does not teach the applicant's claimed nitrogen transmission rate. Mitchell applies as above, teaching that the cushioning devices of the invention have improved gas retention for extended periods of time (abstract). It is

the examiner's position that it would have been prima facie obvious to use the bladders of Mitchell's invention in the seats of Massara's invention to improve gas retention of the back supports.

18. Claims 184-186 are rejected under 35 U.S.C. 103(a) as being unpatentable over Massara et al. in view of Martin.

19. Massara teaches seats having air bladders as back supports in the lumbar region (abstract). However, the reference does not teach the applicant's claimed nitrogen transmission rate. Martin applies as above, teaching that the bladders of the invention have improved gas retention, thinness, and impact resistance (col. 1 lines 38-30). It is the examiner's position that it would have been prima facie obvious to use the bladders of Martin's invention in the seats of Massara's invention to improve gas retention and impact resistance of the back supports.

Double Patenting

20. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

21. Claims 105 and 129-134 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,013,340 A. Although the conflicting claims are not identical, they are not patentably distinct from each other because of substantial overlap of limitations. Claim 1 of the patent differs only from present claim 105 by limiting the membrane to be sealed and in an inflated state and by lacking specification of testing parameters for the gas transmission rate. Regarding the thickness of the membrane used to test the gas transmission rate, the examiner looks to the patent's specification for guidance. Bonk discloses in the abstract that membranes of 20 mils are used to test gas transmission rates, where the nitrogen gas transmission rates of the invention are less than 15.0. The patented claim teaches a sealed and inflated membrane but does not specifically suggest a "cushioning device." Since it is known in the art to use inflated membranes as cushioning devices, it is the examiner's position that it would have been obvious to form a cushioning device from the inflated membranes of the patented claims.

22. Regarding claims 129-134, note the language "wherein said cushioning device is employed" or "is incorporated". Since the claims are drawn to cushioning devices and the limitations are to final products of the intermediate cushioning devices, it is the examiner's position that the limitations of claims 129-134 represent future intended uses. It is the examiner's position that the cushioning device of the patented invention

could function as a cushioning device for various seats or protective equipment articles. Thus, the limitations do not provide a patentably distinct invention.

23. Claims 184-186 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,013,340 A in view of Massara et al.

24. The patent applies as above, lacking mention of the formation of seat cushions including lumbar supports. Massara teaches the conventionality of using air bladders as cushions for the lumbar region of a seat back, where the cushions provide selective contoured adjustment (abstract). It is the examiner's position that it would have been prima facie obvious to use the air bladders of the patented invention as seat cushioning in the lumbar region of a seat back to provide selective contoured adjustment having improved air retention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie D. Bissett whose telephone number is (571) 272-1068. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Melanie D. Bissett
Patent Examiner
Art Unit 1711

mdb